

Methane Recovery in Russian Gas Sector: XA-83442701-0  
Quarterly Project Report to EPA: Fourth Quarter

**A. Project Manager: Bryan Weigle, Environmental Defense Fund**

**B. Reporting Period: October to December, 2010**

**C. Current Status:**

EDF, together with VNIIGAZ and Gazprom Dobycha Yamburg, with support from US EPA, Pacific Northwest Laboratory (PNL), and ICF International, organized a workshop/training session in the pilot region of Yamburg. The workshop was held at the premises of Gazprom Dobycha Yamburg, the daughter company of Gazprom, which operates two of the world's largest gas fields in Northern Siberia. The workshop was held over the course of two days, and included a site trip to Yamburg's gas/gas condensate field and to the main office of the company in the city of Novy Urengoy, where the presentation and discussion component of the workshop was held.

The site visit to the town of Yamburg was extremely useful for understanding Gazprom's practical application of the control and management of methane emissions during the extraction, processing, transportation and storage of natural gas. We visited the gas extraction sites (well clusters), saw the gas transportation pipelines, processing facility (refinery), and were able to observe the emissions control systems at their various production stages. We were informed that the technologies applied in Yamburg are not very modern in comparison to the Urengoy gas field. However, it can be concluded that the production processes are very well organized and losses of natural gas are minimal at the production and processing stages, and are identified and managed according to the specific trait of each production technology. We were also informed that the transportation networks contribute to the highest share of total methane emissions.

The workshop presentations were made by representatives of EDF, US EPA, VNIIGAZ, ICF, PNL and Gazprom Dobycha Yamburg. The following topics were covered:

1. Political rationale for effective methane emissions control in the Russian gas sector.
2. Role of Russian and international climate change, environmental, economic, and energy efficiency policy on the mitigation of methane emissions.
3. International experience in GHG emissions management, and its applicability to the Russian gas sector.
4. US EPA's overview of the newly drafted reporting rules for the U.S. oil and gas sector.
5. Technological solutions for methane emissions control in the gas sector.
6. Gazprom's experience in the registering of methane emissions and the assessment and evaluation of the potential for emissions reductions, taking various technological options under consideration.

7. Information technologies for emissions management (registry, information systems, software, etc.).
8. Plans for further work on the project.

These presentations are currently being translated into English, and will be made available no later than mid-February 2011.

One of the most compelling issues raised and discussed at the workshop was VNIIGAZ's statement that Gazprom will be able to reach a corporate-wide target of reducing methane emissions by 65% below 1990 levels by 2015 (from about 270 to 95 mln tons of CO<sub>2</sub>-eq). Gazprom Dobycha Yamburg also agreed to the creation of a special "document of resolution" to collaborate with EDF, Vniigaz, and the US EPA on the pilot emissions inventory at the Yamburg gas field production site. This document, which will be endorsed by Gazprom at the executive level, will be finalized within the next few weeks. Our project team will help the company to establish the appropriate methodological and information systems for the accurate inventory, registry and management of these methane emissions.

The methodological work has been completed in this quarter. Based on the IPCC and other international and Russian methodological guidelines, VNIIGAZ prepared and tested the corporate methodology for methane emission inventory. Specific internal regulations were incorporated into this methodology, as required by Gazprom. This methodology will be applied to the detailed inventory of emissions in the next stage of project implementation (report of results to be finalized February 2011), and the results will then be reviewed by independent experts in May-June 2011.

Technological and other options for methane emission reduction have been identified by Gazprom as a whole. They have identified the use of mobile compressors for the prevention of gas venting from the main pipelines in emergency cases and during the prophylactic maintenance work as the most likely effective option to achieve emissions reductions. A more detailed assessment of this and other options will be done in the upcoming project phase.

Representatives of EDF and Gazprom also attended a methodological side-event that focused on the gas sector at the UNFCCC climate talks in Cancún, Mexico. The new Global Oil and Gas Association (IPIECA) guidelines for methane emissions inventory were presented and discussed at the highly attended event. These guidelines will be officially published in the first quarter of the 2011 calendar year and provide recommendations for oil and gas companies on the inventory and registry of emissions. Together with Vniigaz, we plan to consider these guidelines for application by Russian gas companies.

#### **D. Deliverables and Works in Progress**

- Report on results of Gazprom's methane emissions case study inventory for a representative facility of Gazprom Dobycha Yamburg gas treatment unit (UKPG-1B) (mid-February 2011)

- PowerPoint presentations from the December, 2010 Gazprom dobycha Yamburg gas treatment unit Yamburg Dobycha pilot workshop translated into English (mid-February 2011)
- Protocol/MOU document signed by EDF, Gazprom Dobycha Yamburg, and EPA agreeing to collaborate on the implementation of the pilot inventory at the Gazprom dobycha Yamburg gas treatment unit (mid-February 2011)

#### **E. Upcoming Events**

No immediate events to take place in the upcoming quarter.

#### **F. Budget:**

Expenses incurred during this quarter have been or are being billed to EPA.